Wind Powering America Overview

Larry Flowers

FY05 DOE Wind Implementation Meeting
November 17, 2004

Wind Powering America Strategy

Goal: By 2010, at least 100 MW installed in 30 states

Annual Goals & Targets		
Year	> 20 MW	**> 100 MW**
2003	19	**10**
2004	25	**12**
2005	32	**16**
2006	34	**19**
2007	36	**22**
2008	38	**25**
2009	39	**27**
2010	40	**30**

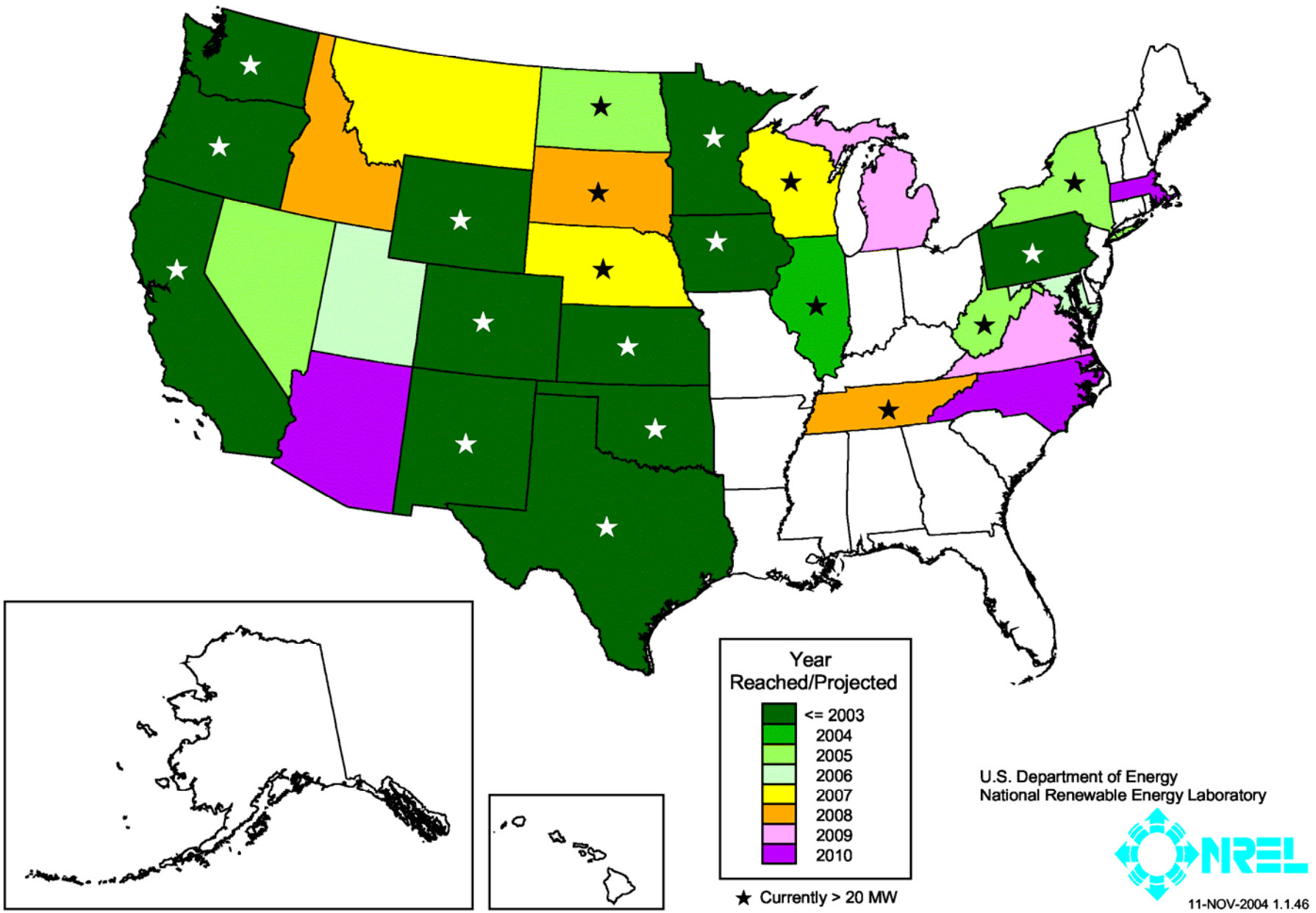
Thematic Areas

- State Wind Support
- Utility Partnerships
- Rural Economic Development
- Native American Tribal Outreach
- Distributed (Small) Wind

Select States Supported

- ***Alaska***
- ***Arizona***
- **California**
- **Colorado**
- Connecticut
- Delaware
- Georgia
- **Hawaii**
- ***Idaho***
- *Illinois*
- Indiana
- Iowa
- **Kansas**
- Kentucky
- Maine
- **Maryland**
- Massachusetts
- ***Michigan***
- Minnesota
- Missouri
- ***Montana***
- *Nebraska*
- ***Nevada***
- New Hampshire
- New Jersey
- **New Mexico**
- New York
- ***North Carolina***
- **North Dakota**
- **Ohio**
- **Oklahoma**
- **Oregon**
- **Pennsylvania**
- Puerto Rico
- Rhode Island
- ***South Dakota***
- ***Utah***
- Vermont
- ***Virginia***
- **Washington**
- **West Virginia**
- Wisconsin
- Wyoming

Year State Reaches 100 MW Installed Wind Capacity



State Maturity Matrix

WPA Tech Acceptance State Criteria Ranking	Seattle Region								Denver Region								
	NV	ID	AZ	AK	HI	WA	OR	CA	CO	OK	SD	UT	NM	KS	NE	ND	MT	TX
LEVEL OF ADOPTION									●	●	●	●	●	●	●	●	●	●
How much capacity is installed, in both large and small turbines?									●	●	●	●	●	●	●	●	●	●
What % of the state's potential is being used?									●	●	●	●	●	●	●	●	●	●
What % of the state's energy use is Wind?									●	●	●	●	●	●	●	●	●	●
OVERALL AWARENESS										●		●						
State Wind Working Group? Is it Self Sufficient?										●		●						
Are there Workshops & Annual State Conferences?										●		●						
LEGISLATIVE & REGULATORY ENVIRONMENT										●		●						
Is there an enabling policy environment? (RPS, PTC, etc?)										●		●						
Are there institutional partnerships with ag. groups, utilities, state ed institutions?										●		●						
SMALL WIND										●		●						
Have WPA Small Wind Guides been published?										●		●						
Are there effective Net Metering Rules?										●		●						
Enabling policy environment? (buydowns. etc)										●		●						
Are there workshops?										●		●						
Targeted efforts to produce equitable zoning considerations (height variances, setbacks)										●		●						
Is state involved with IREC small wind group?										●		●						
RESOURCE ASSESSMENT										●		●						
WPA Anemometer Loan Program? Needs met?										●		●						
Validated Resource Atlas?										●		●						
Can prospective developers estimate energy production using WPA tools?										●		●						
SITING & ZONING CONSTRAINTS										●		●						
Have all undue blanket zoning restrictions been removed?										●		●						
Do state & local Govts have standardized & equitable procedures for approval?										●		●						
EMERGING MARKETS										●		●						
Growing interest in the use of wind for local communities & schools?										●		●						
Is wind being considered for use in producing clean water?										●		●						
Is the potential for offshore deployment of wind beiong addressed?										n/a		n/a						
Are federal & state loads being served by wind?										●		●						

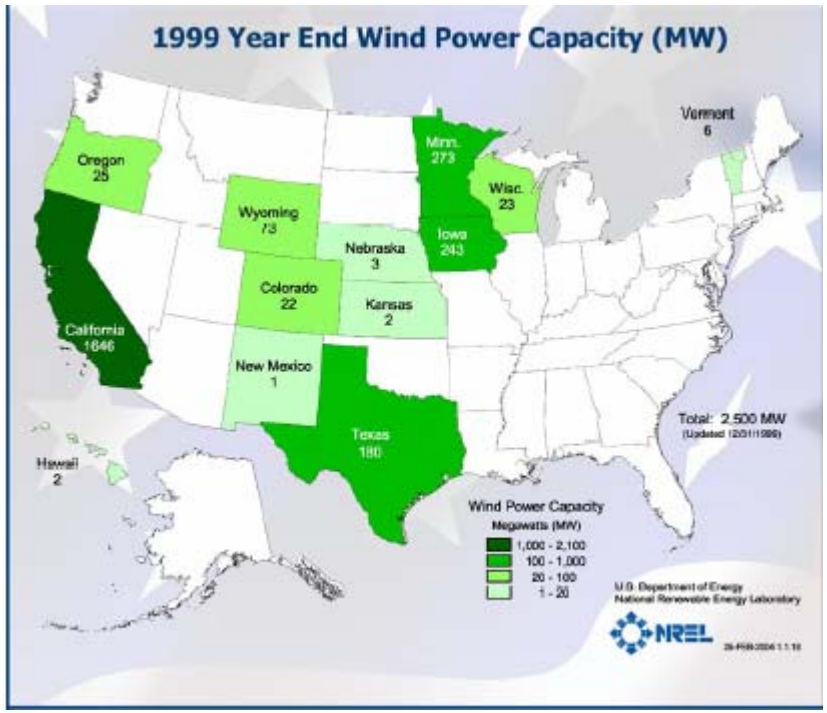
NREL

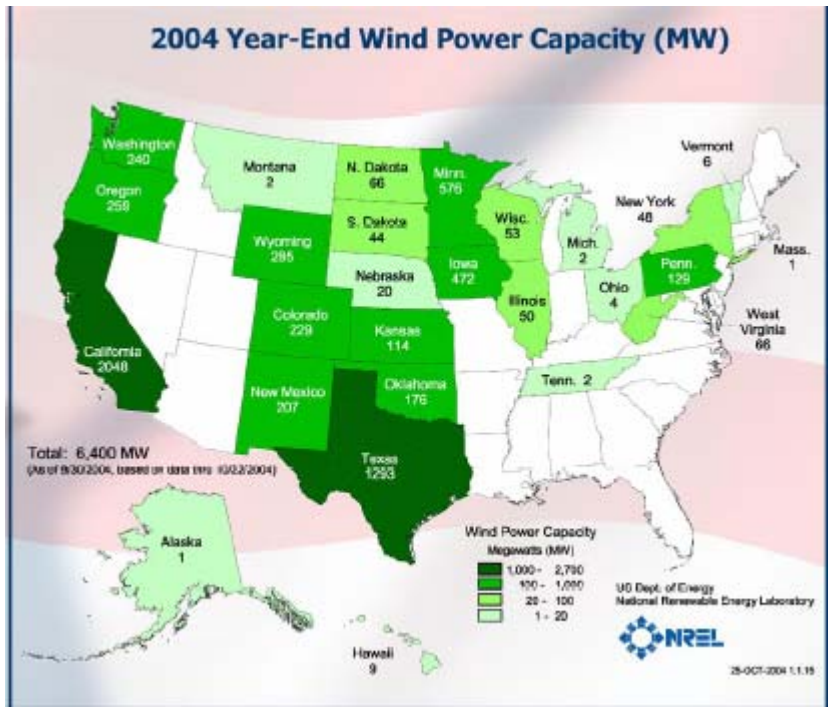
WIND POWERING AMERICA

Operating Principles

- Work at the market margins
- Leverage existing institutional partnerships
- Create strategic partnerships
- Create, educate, and support wind working groups
- Create and disseminate targeted info, analyses, and tools
- Select and address strategic challenges and special opportunities
- Utilize existing national, regional, and local expertise
- Coordinate with established wind institutional resources

Installed Wind Capacities (99-04)





WPA Management Activities

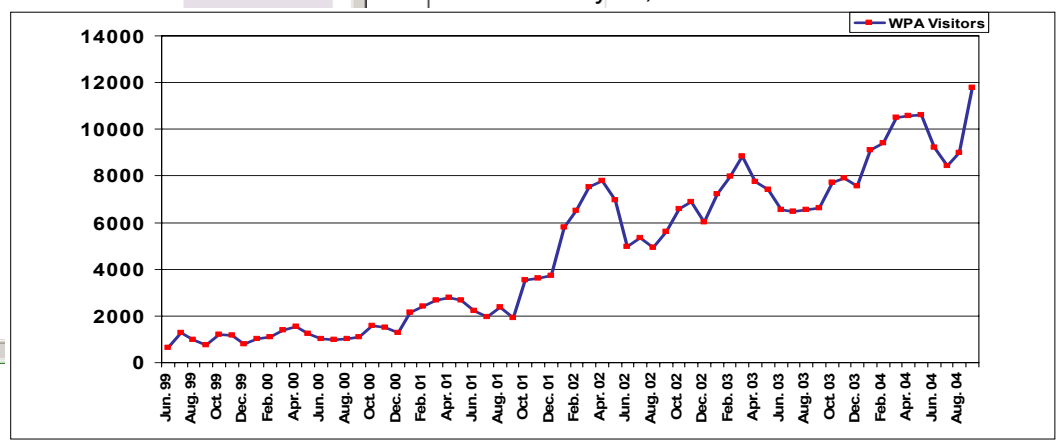
- Strategy Team
- State Summit
- BLM/USFS Policy & Analysis
- WPA Website
- Schools Pilot
- WEF Technical Support
- Advocates Awards
- FEMP Technical Assistance
- State Lands Policy
- Energy Air Nexus Analysis
- Community Wind Analysis
- Comparative Economics of Bulk Power Options
- Publications
- NWCC Participation
- Stakeholder Interviews
- Windpower 04 paper

Wind Powering Arabia

WPA Website

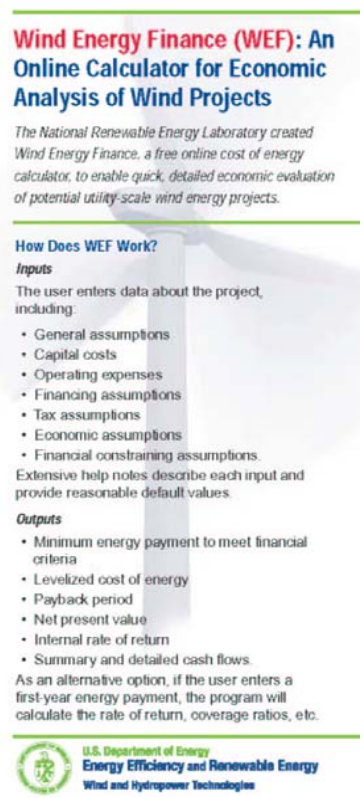
Visitors Per Month

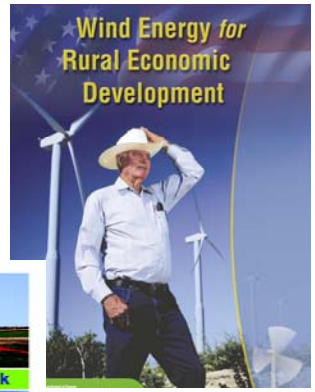
June 1999 – February 28, 2004

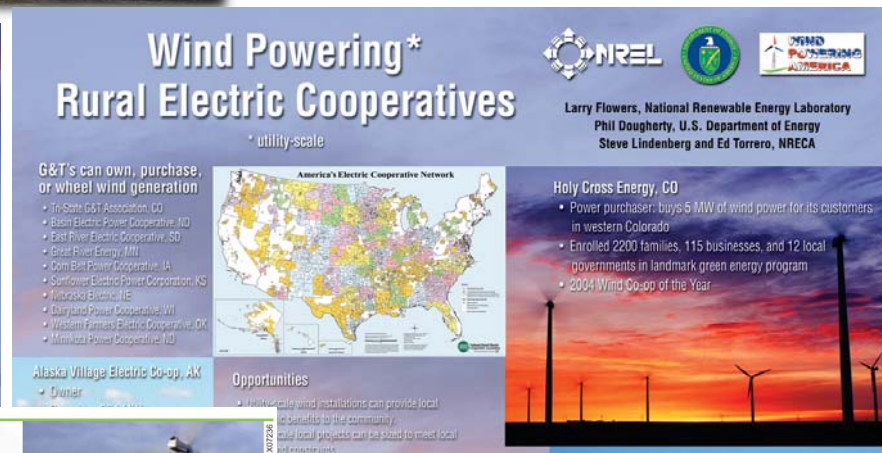


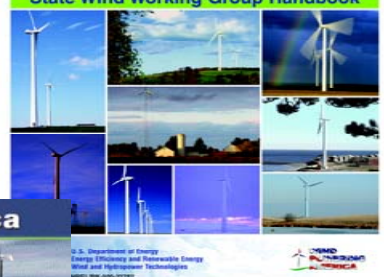
* In Dec. 2001, NREL started using a new Web site statistics package.

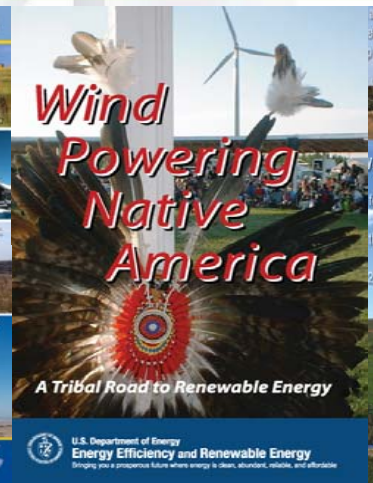
WPA Publications

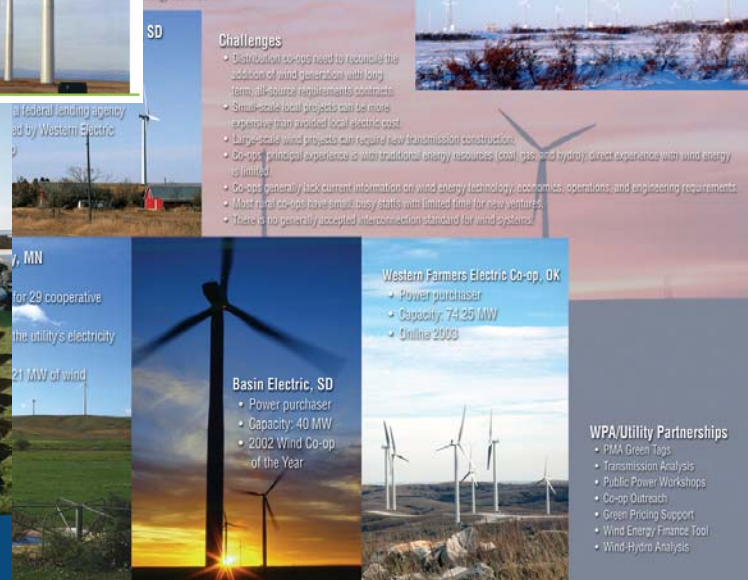




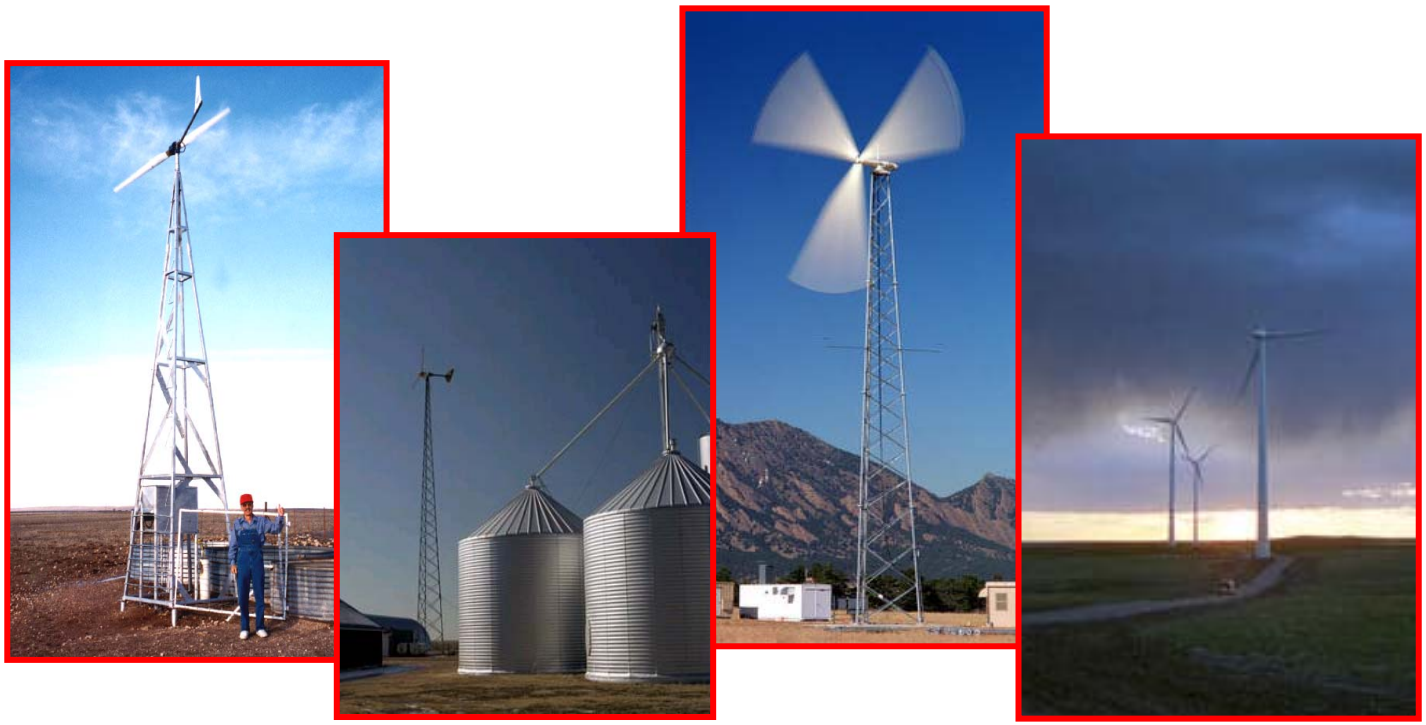








Wind Energy Update



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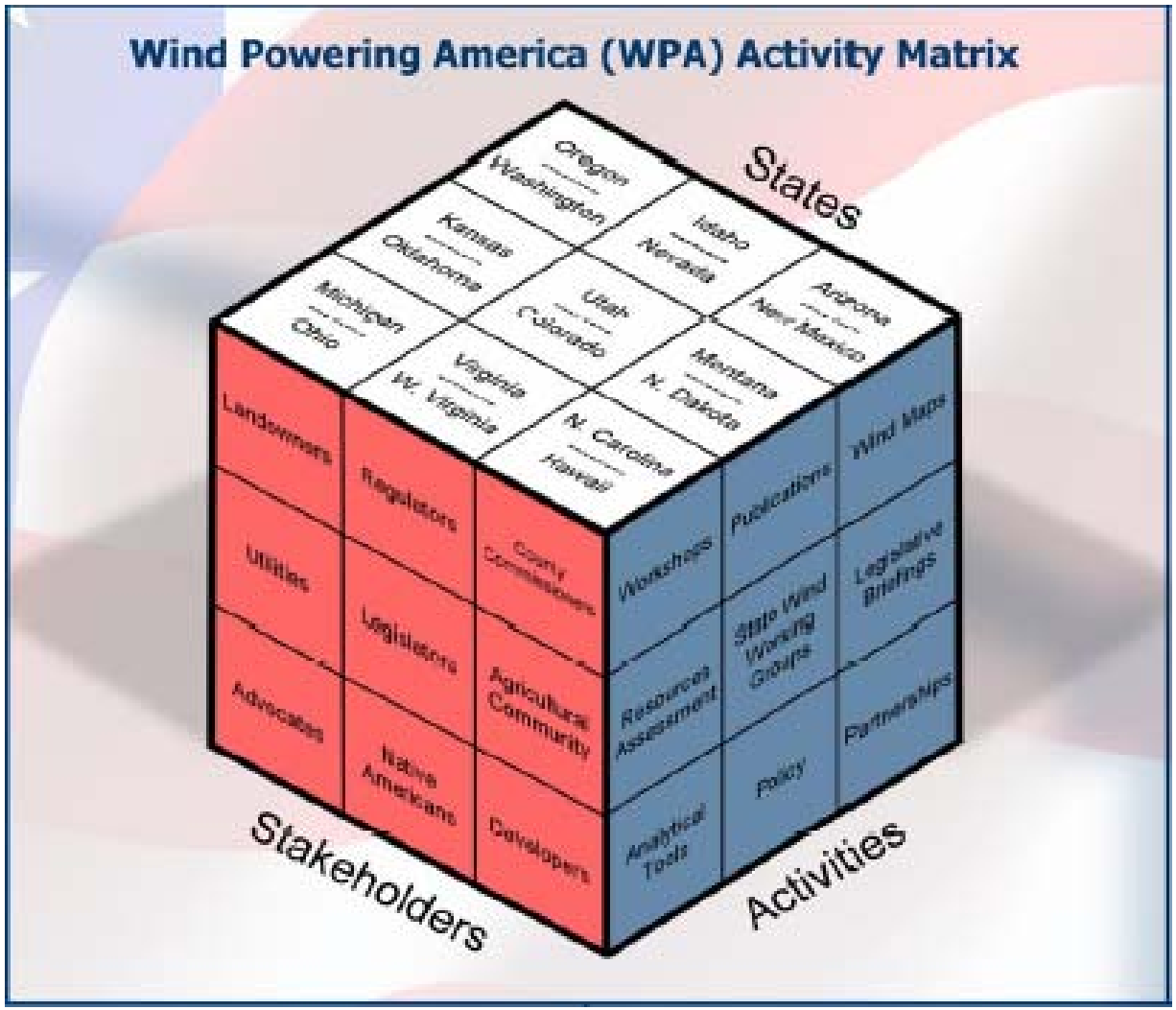
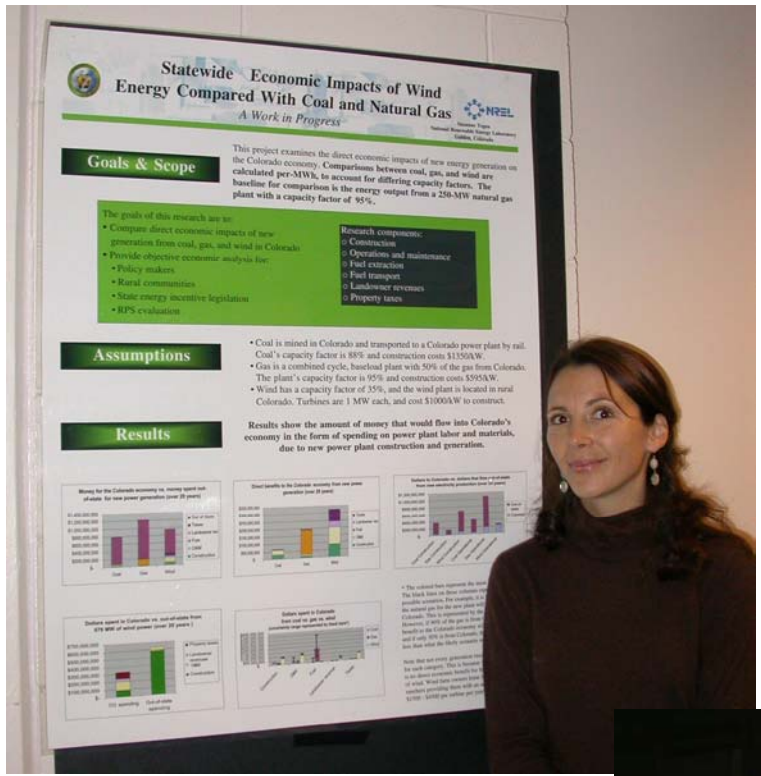
Wind Powering America

November 9, 2004


Wind Powering America (WPA) Activity Matrix
States
Oregon
Washington
Idaho
Nevada
Kansas
Oklahoma
Arizona
New Mexico
Michigan
Ohio
Utah
Colorado
Montana
N. Dakota
Virginia
W. Virginia
N. Carolina
Hawaii
Landowners
Regulators
County Commissioners
Utilities
Legislators
Agricultural Community
Advocates
Native Americans
Developers
Workshops
Publications
Wind Maps
State Wind Working Groups
Legislative Briefings
Resource Assessment
Policy
Partnerships
Analytical Tools
Stakeholders
Activities

Student Projects



WPA Team